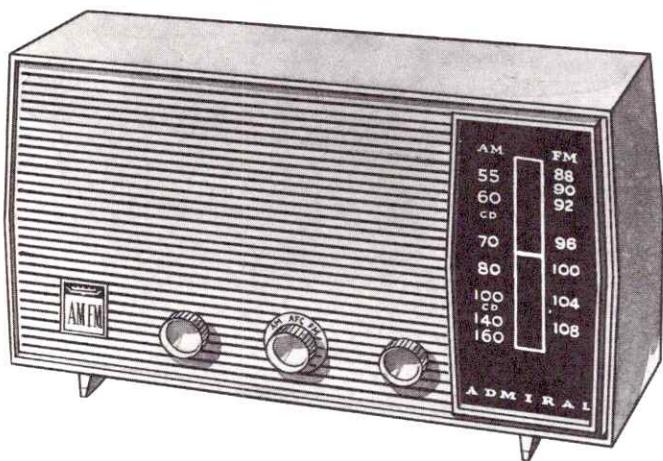


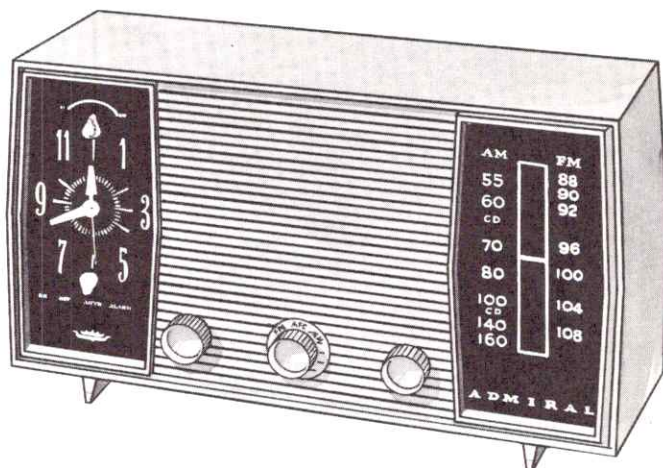
ADMIRAL®

FM - AM RADIO

6A4N-6A4NA CHASSIS



Y3590 N SERIES



Y3600 N SERIES

MODEL IDENTIFICATION CHART			
MODEL	COLOR	CLOCK	CHASSIS
Y3593N	White	No	6A4N
Y3597N	Beige	No	
Y3598N	Green	No	
Y3603N	White	Yes	6A4NA
Y3607N	Beige	Yes	
Y3609N	Blue	Yes	

SPECIFICATIONS

ANTENNA: FM: Mono lead; clip-on terminals for 300 ohm line.

AM: Ferroscope (Ferrite Rod).

IF FREQUENCY: FM: 10.7 MC.

AM: 455 KC.

POWER SUPPLY: 117V, 60 Cycles AC

POWER CONSUMPTION: 35 Watts.

SPEAKER: 4" PM with Alnico V magnet. Voice coil impedance 3.2 ohms.

DO NOT CONNECT AN EARTH GROUND TO THIS RECEIVER

The chassis is connected directly to one side of the power line. To avoid the possibility of damage to test equipment or to the receiver, do not place the chassis directly on a metal bench, near tools or near other metal objects.

ANTENNA INFORMATION

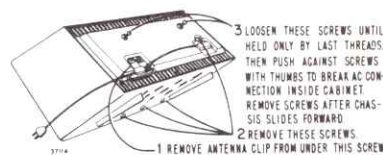
These sets are equipped with built-in AM and FM antennas which will provide satisfactory reception in areas of normal signal strength. The FM antenna is the length of wire attached under one of the FM antenna terminal screws on the back of the set. For best signal pickup, simply move the antenna into several positions and leave in the position giving best reception. Do not connect a ground wire to this set.

IMPORTANT: The length of the unipole antenna is critical. Changing the length of this wire antenna will seriously affect satisfactory reception of FM radio signals. Never connect another wire to it or cut any amount off of it.

CONNECTING EXTERNAL FM ANTENNA:

Remove the built-in FM antenna wire from under the terminal screw. Connect external FM antenna leads to the two terminal screws. Tighten screws securely.

CHASSIS REMOVAL



CHASSIS REMOVAL

1. Pull knobs off and carefully pry up top of cabinet at back with finger tips enough to allow removal of cabinet back.
2. Remove two screws holding dial scale to cabinet front.
3. Slide chassis out for servicing.

PRICE 15 CENTS

SERVICE MANUAL S979

ALIGNMENT PROCEDURE

FM RF AND IF ALIGNMENT USING AM SIGNAL GENERATION AND VTVM

- WARNING:** The chassis of this receiver is connected directly to one side of the AC line. Use an isolation transformer or make certain that the ground leads of the receiver and test equipment are all connected to the grounded side of the AC line.
- Allow set and test equipment to warm up for at least 5 minutes before proceeding.
- Set function switch at FM position.
- For IF alignment, inject the 10.7MC unmodulated signal by means of an ungrounded tube shield on the RF tube (HCC85/17EW8).
- For RF alignment, inject signal into antenna terminals as follows: High side of signal generator to nickel screw through a 120 ohm resistor; low side to brass screw through a 150 ohm resistor.
- Use the lowest signal input possible to give a usable reading on the 1.5V minus DC scale, except in step 2 use maximum signal and the zero center scale, if available.
- Use non-metallic alignment tools. Use an insulated screwdriver with blade no wider than 3/32".

STEP	SIGNAL GENERATOR CONNECTION	SIGNAL GENERATOR FREQUENCY	RECEIVER DIAL SETTING	VTVM CONNECTION	ADJUSTMENT	REMARKS
1	Ungrounded tube shield atop RF tube (HCC85)	10.7 Unmod.	High end. (Dial fully clockwise)	VTVM to TPI Ground to Chassis	Ⓐ Ⓑ Ⓒ Ⓓ and Ⓔ for maximum	
2	Same as Step 1	10.7 Unmod.	Same as Step 1	Move VTVM lead to TP2.	Ⓕ for zero center	Use zero center scale on VTVM. Increase signal input to maximum.

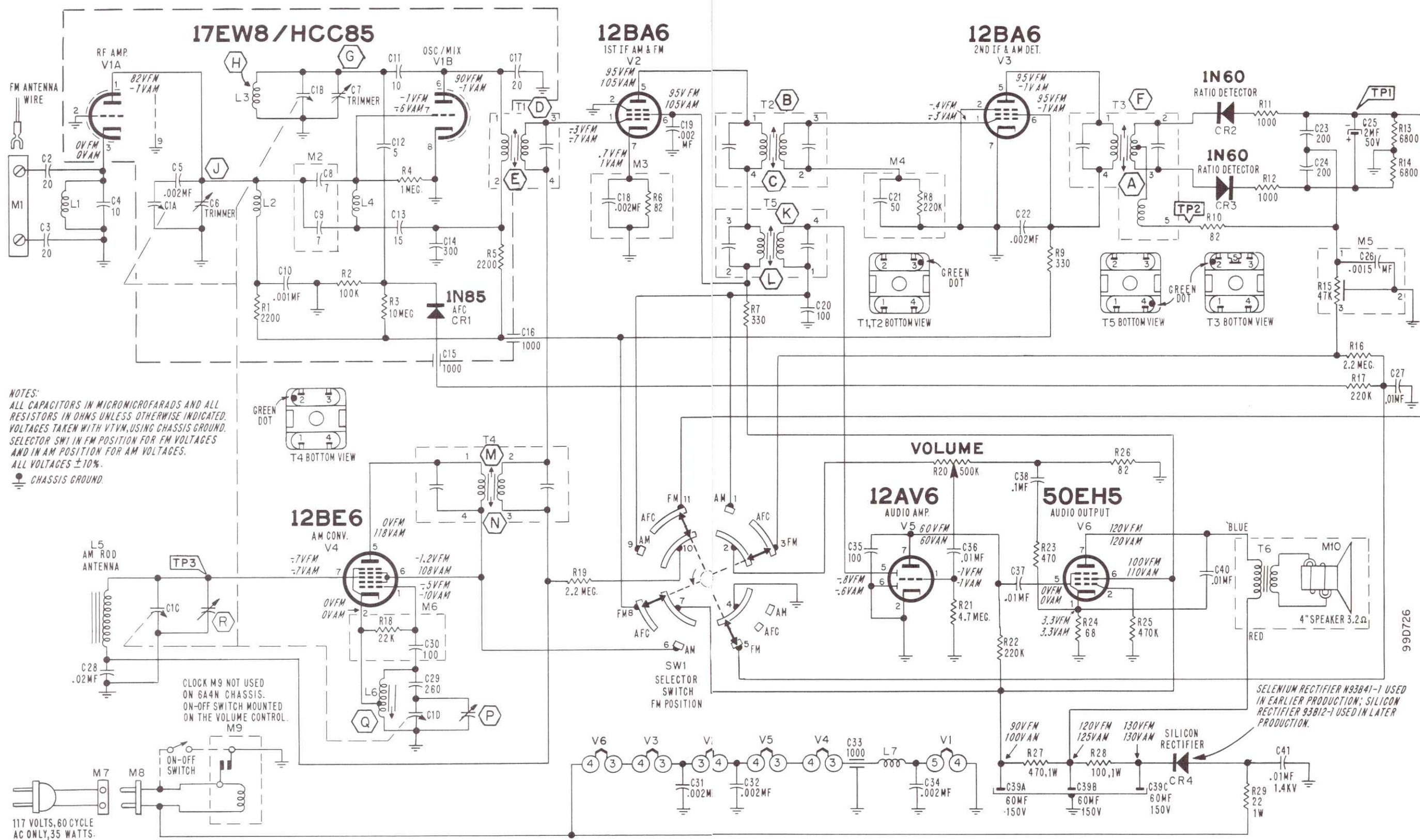
NOTE: When Ⓕ is properly adjusted, meter will swing sharply from zero center as core is mis-adjusted in either direction.

3	Antenna terminals through resistors described in paragraph 5 above.	108.4 MC UNMOD.	Same as Step 1	Same as Step 1	Ⓖ for maximum	Only slight adjustment will be required.
4	Same as Step 3	88 MC UNMOD.	Tune in 88 MC on dial	Same as Step 1	* Ⓕ for maximum	Increase or decrease space between turns on L3.
5	Same as Step 4	106 MC UNMOD.	Tune in 106 MC on dial	Same as Step 1	Ⓖ for maximum	

* Factory aligned at 88 MC. Re-alignment normally not required.

AM ALIGNMENT TURN FUNCTION SWITCH TO AM POSITION VOLUME CONTROL FULLY OPEN

STEP	CONNECTION OF SIGNAL GENERATOR	SIGNAL GENERATOR FREQUENCY	RECEIVER GANG SETTING	ADJUSTMENT
1	Through a .1 mf capacitor TP3.	455 KC 30% Mod.	Fully open	Ⓚ Ⓛ Ⓜ and Ⓝ for maximum on output meter.
2	Use a radiated signal. Loop of several turns of wire, or place generator lead close to antenna loop for adequate signal pickup.	1620 KC 30% MOD.	Fully open	Ⓟ for maximum
3		535 KC 30% MOD.	Fully open	Ⓠ for maximum
4		Repeat above two steps until 535-1620 KC range is established.		
5	Same as Steps 2, 3 and 4	1400 KC 30% MOD.	Tune in generator signal	Ⓡ for maximum



PARTS LIST

Order parts by part number and description from your ADMIRAL distributor

RESISTORS

SYMBOL	DESCRIPTION	PART NO.
R1	2.2K	60B8-222
R2	100K	60B8-104
R3	10 meg	60B8-106
R4	1 meg	60B8-105
R5	2.2K	60B8-222
R7, 9	330 ohms	60B8-331
R10	82 ohms	60B8-820
R11, 12	1000	60B8-102
R13, 14	6.8K	60B8-682
R16	2.2 meg	60B8-225
R17	220K	60B8-224
R19	2.2 meg	60B8-225
R20	500K, Volume Control, 6A4N with SW2	75D99-1
	6A4NA without SW2	75D99-2
R21	4.7 meg	60B8-475
R22	220K	60B8-224
R23	470	60B8-471
R24	68 ohms	60B8-680
R24	470K	60B8-474
R26	82 ohms	60B8-820
R27	470 ohms, 1 Watt	60B14-471
R28	100 ohms, 1 Watt	60B14-101
R29	22 ohms, 1 Watt	60B14-220

CAPACITORS

C1A } C1B } C1C } C1D }	Tuning Gang	68B105-1
C2, 3	20 mmf, 1400 V, Ceramic Disc	65B112-15
C4	10 mmf, 250V, Ceramic Disc	65B112-14
C5	.002 mf, Ceramic Disc	65B112-10
C6	7 mmf, Trimmer	66B48-1
C7	9 mmf, Trimmer	66B48-2
C10	.001 mf, 20%, Ceramic Disc	65B112-9
C11	10 mmf, N220, Ceramic Disc	65B112-17
C12	5 mmf, N330, Ceramic Disc	65D112-16
C13	15 mmf, 5%, Ceramic Disc	65D112-19
C14	300 mmf, Tubular Ceramic	65D112-23
C15, 16	1000 mf, Feed Thru	65B112-24
C17	20 mmf, 5%, N220	65D112-18
C19	.002 mf	65B112-10
C20	100 mmf	65B112-20
C22	.002 mf	65B112-10
C23, 24	200 mmf, 5%	65D112-22
C25	2 mf, 50V, Electrolytic	67B65-2
C27	.01 mf, 50V	65B112-11
C28	.02 mf, 50V	65B112-13
C29	260 mmf, 5%, Tubular Ceramic	65B112-34
C31, 32	.002 mf	65B112-10
C35	100 mmf	65B112-15
C36	.01 mf	65B112-11
C37	.01 mf	65B112-12
C38	.1 mf, 100V, Mylar	65B112-25
C39A	60 mf, 150V	Electrolytic 67B65-1
C39B	60 mf, 150V	
C39C	60 mf, 150V	
C40	.01 mf	65B112-9
C41	.01 mf, 1.4KV	65B112-12
C42, 43	Trimmers, AM Gang	66B48-3

COILS AND TRANSFORMERS

SYMBOL	DESCRIPTION	PART NO.
L1	Antenna Coil (FM)	73B41-1
L2	RF Coil (FM)	73B41-2
L3	Oscillator Coil (FM)	73B41-3
L4	RF Choke Coil	Part of L3
L5	Rod Antenna (AM)	69B314-2
L6	Oscillator Coil (AM)	69B314-1
L7	Filament Choke	73B41-4
T1	First FM IF Transformer	72B254-18
T2	Second FM IF Transformer	72B254-19
T3	FM Radio Detector Transformer	72B254-20
T4	First AM IF Transformer	72B254-21
T5	Second Am IF Transformer	72B254-22

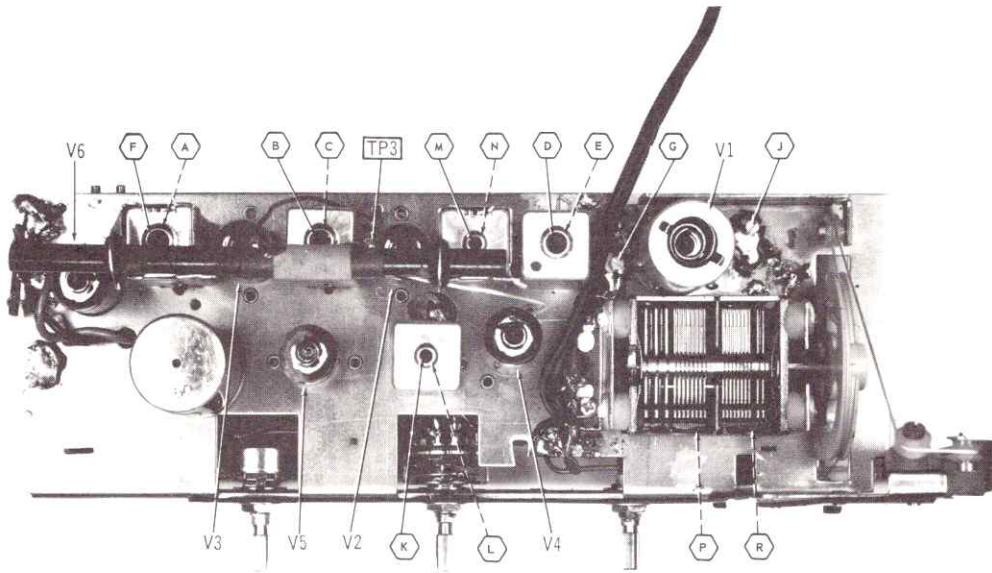
MISCELLANEOUS CHASSIS PARTS

M2	C8 and C9 Couplate	63B20-1
M3	C18 and R6 Couplate	63B20-3
M4	C21 and R8 Couplate	63B20-2
M5	R15 and C26 Couplate	63B20-4
M6	C30 and R18 Couplate	63B20-5
M7	AC Cord Complete	89C62-11
M8	Chassis Interlock	88B77-1
M9	Clock Assembly	91D69-1
M10	Speaker 4", 3.2 ohms, with Transformer	78B203-1
SW1	Function Switch	77B151-1
CR1	AFC Diode, 1N85	93B41-3
CR2, 3	Detector Diode, 1N60	93B41-2
CR4	Selenium Rectifier	93B41-1
	Early Production	
	Silicon Rectifier Late Production	93B12-1
	AM Antenna Bracket	15B2846-1
	Dial Pointer	25B99-1
	Dial Pointer Holder	15B2846-5
	Dial String Drive Shaft	27B407-1
	Dial String Pulley (Small)	17B67-3
	Dial String Spring	19B225-2
	Large Tuning Gang Pulley	17B67-2
	Rubber Grommet for AM Antenna	12B139-2

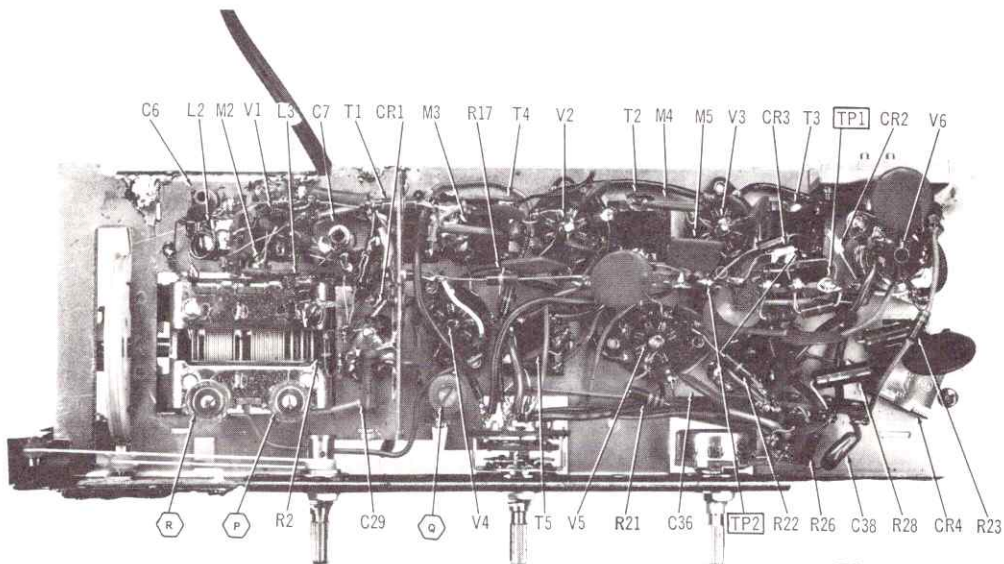
CABINET PARTS LIST

Cabinet		
Y3593	White	34D245-1
Y3597	Beige	34D245-2
Y3598	Green	34E245-3
Y3603	White	34D245-4
Y3607	Beige	34D245-5
Y3609	Blue	34D245-6
Cabinet Back		43D466-1
Clock Crystal		24B70-2
Dial String		50B9-2
Knobs		
Function		33B648-1
Volume Tuning		33B648-2
Tuning Dial Crystal		24B70-1
Operating Instructions		41C20-538
Dial Scale		21B181-1
CLOCK PARTS FOR Y3600 SERIES		
Clock Assembly		91D69-1
Clock Knobs		33B555-1
Hour Hand		25B96-3
Minute Hand		25B96-2
Second Hand		25B96-1
Clock Face		21B181-2
Alarm Hand		25B96-4
Time Set Shafts		91B64-8

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TOP VIEW OF CHASSIS SHOWING ALIGNMENT POINTS AND COMPONENTS



BOTTOM VIEW OF CHASSIS

DIAL STRINGING DIAGRAM

